

Amendments to claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

42. (currently amended) The sum of its parts and function of;
a rotary piston continuous flow positive and dynamic
displacement multiple purpose multiple fluid capable expandible
chamber device comprising;
a hollow toroidal annular cylinder housing with a smooth inner
surface;
a shaft having a longitudinal rotational axis aligned to a center
of said toroidal annular cylinder housing;
a rotor mounted for rotation with said shaft;
at least one piston mounted radially on said rotor for circular
movement in said housing when said rotor is rotated, each said piston
having a conformably shaped outer peripheral surface in relation to
said cylinder housing said piston having a sloping back as an inclined

plane that gradually ramps from surface of said rotor to top of said piston;

an intake port through said housing to allow a working fluid to enter said hollow housing;

at least one isolating valve conformably shaped and associated with a respective piston and said hollow cylinder housing pivotably connected at one end to said housing upstream and before said intake port, another end of said isolating valve being in sliding contact with said conformably shaped outer peripheral surface of said associated piston and said rotor following said conformably shaped surface;

an accumulator area formed downstream of said valve starting at the downstream side of said intake port and ending at

an initial a-top seal point, said top initial seal point formed at a point that said piston seals with said smooth inner surface of said hollow cylinder at the down stream end of said accumulator area and of said intake port;

an exhaust port for the discharge of said working fluid from said housing, said exhaust port located downstream of said initial seal

point said accumulator area and said intake port on the periphery of said ~~toroid~~ annular cylinder and after said piston and fluid's function is completed.

43. (original) A rotary piston continuous flow positive and dynamic displacement expandible chamber device according to claim 42, wherein said pistons further comprise;

a plurality of piston rings mounted in ring grooves on said pistons.

44. (original) A rotary piston continuous flow positive and dynamic displacement expandible chamber device according to claim 42, wherein said valve has means for the attachment of external controls said controls comprising;

a valve pivot shaft extending through to the outside of said cylinder area with means for attachment to an external control lever thereto attached to

a rotating cam that is in synchronization with the rotation of said rotor and pistons, said lever rides on said external cam a governor rotably connected to said rotating cam that as the revolutions increase said governor limits the extent of the closing travel of said valve in synchronization with the approaching and passing of said piston thus forcing said valve to progressively wave and flutter rhythmically, not closing completely, acting as a fluidic amplifier at higher revolutions, said external controls thus also prevent contact by said valve and said rotor and pistons thereby significantly reducing wear to said components.

45. (original) A rotary piston continuous flow positive and dynamic displacement expansible chamber device according to claim 43, wherein said valve has means for the attachment of external controls, said controls comprising;
a valve pivot assembly with means for attachment to an external control lever attached to

a rotating cam that is in synchronization with the rotation of said rotor and pistons, said lever rides on said external cam a governor that limits the extent of the closing travel of said valve in synchronization with the approaching and passing of said piston thus forcing said valve to act as a fluidic amplifier at higher revolutions, said external controls thus preventing contact by said valve and said rotor and pistons preventing excessive wear to said components.

46. (currently amended) A rotary piston continuous flow positive and dynamic displacement expandible chamber device according to claim 42, wherein said valve is spring loaded in the closed position and reversed horizontally in position relative to said valve in claim 42 and relative to the rotation of said rotor and at least one approaching piston making the said valve's leading in sliding contact edge of said valve face said piston's sloping back slope of said approaching pistons, said

exhaust port is located just upstream downstream along the periphery of said hollow toroid annular cylinder housing relative said intake port and to the rotation and travel of said rotor and said piston and said working fluid's flow, said intake port is located upstream and on the opposite side of said valve near the fixed pivoting position of said valve.

47. (original) A rotary piston continuous flow positive and dynamic displacement expansible chamber device according to claim 46, wherein said pistons further comprise;

a plurality of piston rings mounted in ring grooves on said pistons.

48. (original) A rotary piston continuous flow positive and dynamic displacement expansible chamber device according to claim 46, wherein said conformably shaped isolating valve further comprises;

a roller on its underside suspending said valve at close tolerance above said rotor and pistons, said roller suspending said valve at close tolerance above said rotor and pistons thereby minimizing friction and wear to said components.

49. (original) A rotary piston continuous flow positive and dynamic displacement expandible chamber device according to claim 43, wherein said valve further comprises;

a spring that keeps said valve pressed against said conformably shaped rotor and pistons even in the absence of said fluid flow.

50. (original) A rotary piston continuous flow positive and dynamic displacement expandible chamber device according to claim 42 wherein said conformably shaped isolating valve further comprises;

a roller on its underside suspending said valve at close tolerance above said rotor and pistons, said roller suspending

said valve at close tolerance above said rotor and pistons,
thereby, minimizing friction and wear to said components.

51. (original) A rotary piston continuous flow positive and dynamic displacement expansible chamber device according to claim 43 wherein said conformably shaped isolating valve further comprises;

a roller on its underside suspending said valve at close tolerance above said rotor and pistons, said roller suspending said valve at close tolerance above said rotor and pistons thereby minimizing friction and wear to said components.

52. (currently amended) The sum of its parts and function of:
a continuous internal combustion positive and dynamic
displacement passive compression compound cycle multiple
fuel capable rotary engine comprising;
a rotary piston continuous flow dynamic displacement expansible chamber device comprising;

a hollow ~~toroid~~ annular cylinder housing with a smooth inner surface;

a shaft having a longitudinal rotational axis aligned to a center of said ~~toroid~~ annular cylinder housing;

a rotor mounted for rotation with said shaft;

at least one piston mounted radially on said rotor for circular movement in said housing when said rotor is rotated, each said piston having a conformably shaped outer peripheral surface in relation to said cylinder housing said piston having a sloping back as an inclined plane that gradually ramps from the surface of said rotor to top of said piston;

an intake port through said housing to allow a working fluid to enter said hollow housing;

at least one isolating valve conformably shaped and associated with a respective piston and said hollow cylinder housing pivotably connected at one end to said housing upstream and before said intake port, another end of said isolating valve being in sliding contact with said conformably

shaped outer peripheral surface of said associated piston and said rotor following said conformably shaped surface;

an accumulator area formed downstream of said valve starting at the downstream side of said intake port and ending at an initial a-top seal point, said top initial seal point formed at a point that said piston seals with said smooth inner surface of said hollow cylinder at the down stream end of said accumulator area and of said intake port;

an exhaust port for the discharge of said working fluid from said housing, said exhaust port located downstream of said initial seal point said accumulator area and said intake port on the periphery of said toroid annular cylinder and after the fluid's function is completed;

Appl. No. 09/173,828
Amdt. dated March 22, 2004
Reply to Office action of Dec. 29, 2003

a combustor mounted over said intake port allowing for combustion gases to be channeled into said toroid cylinder, said combustor comprising;

a means for attachment of fuel and air supply lines and
means for igniting said mixture.

53. (original) A rotary piston continuous flow dynamic
displacement continuous internal combustion engine according
to claim 52, wherein said pistons further comprise;
a plurality of piston rings mounted in ring grooves on
said pistons.

54.(original) A rotary piston internal continuous combustion
dynamic displacement engine according to claim 52, wherein
said device has means for attaching;
a pressurizing air canister to the air lines entering
its combustor supplying start up air for combustion negating the
need for an electric starter.

55. (original) A rotary piston internal continuous combustion dynamic displacement engine according to claim 53, wherein said device has means for attaching;
a pressurizing air canister to the air lines entering its combustor supplying start up air for combustion negating the need for an electric starter.

56.(original) A rotary piston internal continuous combustion dynamic displacement engine according to claim 52, wherein said combustor comprises;
a precombustion chamber also known as an inner stratified flashover reaction cage in its concentric configuration and a means for attachment of fuel and air supply lines and means for igniting said mixture.

57.(original) A rotary piston internal continuous combustion dynamic displacement engine according to claim 53, wherein said combustor comprises;

a precombustion chamber and a means for attachment of fuel and air supply lines and means for igniting said mixture.

58. (original) A rotary piston internal continuous combustion dynamic displacement engine according to claim 52, wherein said conformably shaped isolating valve further comprises; a roller on its underside suspending said valve at close tolerance above said rotor and pistons, thereby minimizing friction and wear to said components.

59.(original) A rotary piston internal continuous combustion dynamic displacement engine according to claim 52, wherein said exhaust port has means for attaching; a turbo charger for supplying air to said combustor.

60. (original) A rotary piston internal continuous combustion dynamic displacement engine according to claim 52, wherein said valve further comprises;

a spring that keeps said valve pressed against said conformably shaped rotor and pistons even in the absence of said combustion flow.

61. (original) A rotary piston internal continuous combustion dynamic displacement engine according to claim 53, wherein said valve further comprises and has means for the attachment of external controls, said controls comprising;

a valve pivot assembly with means for attachment to an external control lever attached to a rotating cam that is in synchronization with the rotation of said rotor and pistons, said lever rides on said external cam;

a governor that limits the extent of the closing travel of said valve in synchronization with the approaching and passing of said piston thus forcing said valve to act as a fluidic

amplifier at higher revolutions, said external controls thus preventing contact by said valve and said rotor and pistons preventing excessive wear to said components.

62.(original) A rotary piston internal continuous combustion dynamic displacement engine according to claim 52, wherein said combustor further comprises;
a diffuser located after said combustor in said accumulator area that directs combustion while aiding compression due to the reduction in said flow causing increases in pressure.